

THE ROLE OF THE PUBLIC AND PRIVATE SECTORS  
IN HEALTH FINANCING IN DEVELOPING COUNTRIES

by

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## ABSTRACT

This paper follows the WDR93 in distinguishing between public health programs and clinical services, and argues that whilst the case for public financing of the former is valid, that for the "essential clinical package" is more questionable. This is partly because of the impossibility of any objective definition of an essential clinical package for any country. The use of DALYs (or QALYs) to derive such a package is shown to be conceptually unsound. Equally dubious are the rationales based on "market failure" in health care for public intervention. It is argued there is no a priori reason to believe that with imperfect information (the major cited source of "market failure") there is any political solution which is "Pareto-superior" to that provided by a competitive market. Nor are the other purported "market failures" unique to health markets. So, as arguments based on an unattainable ideal are considered to be irrelevant in suppressing private markets by political solutions for other goods and services, the same conclusion applies to health markets. As regards the justification for public financing of health care for the poor, it is argued this case is only valid for destitutes, who for reasons of political economy may not do any better from public transfers than from private charity. But such charity might be stimulated by earmarking foreign aid funds for poverty alleviation, on a matching basis, to charities dealing with destitutes. Finally, the paper examines the lessons to be learned from the private health care market in the U.S. and the pre-NHS private health market in the U.K. as contrasted with the experience with socialized medicine. It is argued that the ills of the U.S. health market are due to policy induced distortions in their working. For the "working poor" the mutual aid societies of 19th century Britain are of particular relevance for developing countries, and they too could be encouraged through the provision of matching public funds.

JEL Classification:

## INTRODUCTION

This paper examines the role of the public and private sectors in health financing from a viewpoint that differs significantly from the technocratic health economics which has dominated current discussions of health policy. The World Bank's World Development Report 1993, whilst reflecting this viewpoint but avoiding some of its pitfalls provides a useful starting point for our discussion in the first section, which sets out the issues, and discusses the case for public health programs, and the use of quality adjusted life years (QALYs) as a tool for planning public financing/provision of "essential" clinical services.

The second section examines the a priori arguments that have been used to suggest that health care is a different type of "commodity" from other goods and services. Whence, it is claimed, the usual presumption that efficiency and welfare are maximized by the private purchase (by utility maximizing consumers) of an excludable good or service, produced by profit maximizing producers, does not apply to health services. Government involvement either in the form of tax financing and/or regulation of the health care market are recommended as necessary to correct its endemic "market failures". In this section two important distinctions are made to enable us to assess this argument. One concerns the differing vision of the market process and thence of public policy of what can be broadly termed the technocratic "market failure" public economics school, and that underlying the classics (from Adam Smith to Marshall), the neo-Austrians (like Hayek) and the Virginia public choice school (Buchanan et. al.), which view the market as a "discovery process" in Hayek's felicitous phrase. The second concerns the two rival views of the links between ethics, economics and politics outlined in my earlier paper (Lal, 1993) which view the State

respectively as a civil or enterprise association. It is argued that from the classical viewpoint, which also accepts the State as a civil association, there is much less merit in the a priori technocratic arguments than is commonly presumed.

This raises the question: why when similar arguments, concerning, for instance, the desirability of planning and public production, so common after the World War II, have fallen into disrepute -- most especially in the Third and Second worlds -- they are still found persuasive in the area of health care? This question is addressed in the third section, which argues that as in many shifting areas of concern in development thinking and practice, the contemporary concerns of developed countries, in particular the U.S., have usually set the agenda. It is the perceived failings of the U.S. health care market -- supposedly the paradigm of the private route to health care -- which have made the case for public intervention more persuasive. It is argued however that this view is based on a misreading of the lessons to be learned from the history of health care in the U.S., as well as from the systems that preceded those in countries like the U.K. which now rely primarily on public financing and provision. The role of the mutual aid societies in the U.K. before its National Health Service was established is outlined, as this maybe of particular relevance for current developing countries.

The final section presents our conclusions on the role markets or mandarins should play in health care.

## I. PUBLIC HEALTH AND QALYS AS A PLANNING TOOL

### I. The Issues

The World Development Report 1993 distinguishes between two types of health services: (a) public health programs which "strike against health

problems of entire populations or population groups" and (b) clinical services which "seek to cure or ease the pain of those already sick" (p. 72). It advocates public financing of (a) and states that with regard to (b) "governments have a fundamental responsibility for ensuring universal access to an essential package of clinical services with special attention to reaching the poor" (p. 108). The "essential" clinical package being chosen by cost-effectiveness criteria which yield the highest reduction of disability adjusted life years (DALYs) per dollar of health expenditure for the diseases relevant in any particular geographical region.

For public health services -- because of purported negative externalities or because of their "publicness" -- public financing from general taxation is common around the world. For clinical services four channels of financing are distinguished by the WDR: private -- out of pocket expenses and voluntary insurance; public -- compulsory insurance "that is either publicly managed or heavily regulated by governments, and funding from general government revenues" (p. 108). A useful table (reproduced here as Table 1) summarizes the rationale and directions for government action in the finance and delivery of clinical services. It is discussed in greater detail in the Section III.

## II. Public Health Programs

It is generally accepted that for physical externalities which are Pareto relevant (see Buchanan and Stubblebine)<sup>1</sup> public intervention is required. Thus public funding of immunization against communicable diseases or if cost effective control of parasitic vectors (malarial mosquitoes, parasitic worm infection) would be justified in most cases. But even here, as Perlman noted, the case is not watertight. For instance, it maybe possible to set geographical bounds to the extent of the externality --

**Table 1 Rationales and directions for government action in the finance and delivery of clinical services**

<i>Area</i>	<i>Conditions that may call for government action: market failure and poverty</i>	<i>Directions for government action</i>
Essential clinical services	Failure to treat, for example, tuberculosis and STDs creates risks for the general population. Public financing can help offset the additional external costs to society. Poor people have limited ability to save or borrow to meet unexpected and uninsured health expenses. Families, including children, can fall into poverty because of ill health.	<p><i>Finance</i> essential clinical services by reallocating current government spending. In low-income countries this may mean increasing public expenditures for health.</p> <p><i>Require</i> through legislation that social insurance or mandated private insurance cover an essential package.</p> <p><i>Encourage</i> more private and NGO provision of essential services, through appropriate legislation and targeted public subsidies.</p>
Clinical services outside the essential package	In insurance markets selection bias leads to lack of coverage for high-risk groups. "Moral hazard," by insulating patient and provider from the cost implications of their decisions, results in overuse of services. The asymmetry of information between patient and provider can cause suppliers to induce excess demand.	<p><i>Reduce or eliminate</i> subsidization of clinical services outside the essential package. Subsidies for public provision of services at less than cost and tax relief for employer and employee health insurance payments often cover services with low cost-effectiveness and primarily benefit the wealthy.</p> <p><i>Legislate</i> compulsory social insurance or mandated private insurance, or define the national essential package comprehensively.</p> <p><i>Limit</i> government involvement in delivery of nonessential services and encourage competition in service delivery by government, NGOs, and the private sector.</p> <p><i>Regulate</i> private insurance by, for example, requiring community risk-rating and forbidding the rejection of high-risk consumers.</p> <p><i>Define</i> the exact content of prepaid packages of care to serve as the products bought and sold in the insurance market.</p> <p><i>Encourage</i> the use of prepayment or salary-based approaches to provider compensation.</p> <p><i>Foster</i> improvements in the quality of private provision by encouraging self-regulation of hospitals, medical schools, and physicians and by disseminating performance indicators.</p>

e.g., a rubber plantation next to a malarial swamp surrounded by an unpopulated area could internalize the externality from a malaria eradication program within its commercial operations.

Moreover, the WDR draws the net for public health measures far too wide -- at least from the viewpoint of classical liberalism. This concerns the section on reducing abuse of tobacco, alcohol and drugs (p. 87). Of these, as drugs are illegal -- for whatever reason -- nothing more needs to be said about them. But the other two substances are legal, and whilst there maybe a case for providing publicly funded information about the abuses of these substances the statement that the State needs to control addiction to tobacco and alcohol is controversial to say the least -- though currently politically correct in the U.S.! A number of very serious issues of civil liberties are involved, relating to the rights of individuals vis a vis the State. They raise the issue of whether the State has an inherent interest in the health of its citizens, as contrasted with an interest in facilitating (if it can) the implementation of the health choices made by individuals. This is discussed in the final part, where we conclude that *in many so called areas of health policy, where there is supposed to be a public interest, on closer examination there turns out to be none.*

For the moment we need only note that, on the classical liberal view, if people knowing the risks choose a risky and legal activity with a high probability of shortening their lives, and bear its financial costs themselves, their decision is to be respected. Nor are the adduced indirect effects of drinking and smoking, a compelling counter-argument -- drunk driving is usually illegal, fires are due to all forms of negligence and smokers normally will pay more for their fire insurance, whilst the indirect effects of passive smoking are, to say the least, controversial (see Huber

# Blame it on fags

Claims that passive smoking causes cancer  
are untrue, says Dr James Le Fanu

**Y**esterday's announcement by TV personality Anne Diamond at a Health Education Authority conference that passive smoking is now the main cause of cot death adds to a lengthening list of diseases attributed to what the Americans call "Environmental Tobacco Smoke". These now include asthma and glue ear in children, breast cancer and brain tumours, heart disease and lung cancer.

Dr Stanton Glantz, of the University of California, has recently asserted that in America alone passive smoking causes 50,000 deaths a year. Not only humans but pets, it seems, are affected. A Californian veterinarian has found a slightly increased risk of lung cancer in dogs where there is a smoker in the home and last week the death from the same disease of a six-year-old, blue-feathered budgie called Peter was blamed on his owners' 40-a-day habit.

There certainly is a clear, if weak, association between the number of adult smokers in a household and acute exacerbations of asthma in children. But much of the rest of the evidence indicting passive smoking is highly equivocal.

Proving a link between passive smoking and lung cancer was never likely to be easy, but back in the late 1970s researchers hit on the idea of comparing the rate of lung cancer in the non-smoking wives of smoking husbands with that where neither partner smoked. There have been 30 such studies with equivocal results — some showing a small positive effect, but others indicating that being married to a smoking husband might even protect against lung cancer. There were also some anomalous observations from the positive studies: one of the earliest showed that passive smoking was more dangerous than active smoking, as the non-smoking wives of heavy smokers seemed to have a higher rate of lung cancer than smoking wives.

In 1986, Professor Nicholas Wald, of St Bartholomew's Hospital, pulled all the data together in a statistical overview and concluded that passive smoking increased the risk of lung cancer by between 10 and 30 per cent, accounting for around 300 deaths from the disease a year in Britain.

Since then, numerous worthy committees have endorsed this conclusion and the experts have become more emphatic in their

Passive smoking is now blamed for an ever lengthening list of

pronouncements. Professor Wald now believes the evidence to be "compelling" and Dr David Burns of the University of California, writing in the *Journal of the National Cancer Institute*, says: "The causal relationship between Environmental Tobacco Smoke and lung cancer is now clearly established."

There is one small problem. There are essentially two types of lung cancer. The commonest are squamous and oat cell cancers, which arise from the cells lining the main bronchi. The second are called adenocarcinomas, which

arise from glandular tissue in the air sacs in the periphery of the lung. From the early 1950s, when Sir Richard Doll and the late Sir Austin Bradford-Hill first proved that smoking caused lung cancer, the important distinction was made that the cancers caused were of the squamous and oat cell type. In 1964, at the conclusion of their famous 10-year study of doctors' smoking habits, they found "no marked association with smoking and adenocarcinoma". On the very rare occasions that non-smokers do get lung cancer, it is almost always of the adenocarcinoma type.

diseases, but for most of them the evidence is at best shaky and in

In the passive smoking studies it is just this type of cancer whose rate has allegedly increased among non-smoking wives of smoking husbands. It is therefore necessary to suppose, if the passive smoking story is to be believed, that carcinogenic cigarette smoke as inhaled by smokers over many years causes one type of cancer, and that the same smoke, as inhaled by passive smokers at doses tens of thousands of times lower causes an entirely different type of cancer, not usually associated with smoking and in a different part of the lung.

Rationalising this in *The Lancet*

last year Dr Clark Heath, of the American Cancer Society, writes: "Presumably this histological and anatomical shift from squamous and oat cell cancers in the central bronchi to adenocarcinomas in the periphery reflects the smaller particle size of Environmental Tobacco Smoke allowing deeper penetration of carcinogens into lung tissue." If you believe that, you'll believe anything.

A better explanation is provided by Professor Alvan Feinstein of Yale University Medical School, and distinguished editor of the *Journal of Clinical Epidemiology*.

some cases downright fanciful

In a recent article he wrote: "As the evidence fails to comply with the prime requisites of scientific reasoning, the prosecution simply ignored these inconvenient results."

In the same article Dr Feinstein revealed that he "recently had heard an authoritative public health expert say 'yes it's rotten science, but it's in a worthy cause. It will help us get rid of cigarettes and become a smoke-free society'." There are indeed many good reasons for giving up smoking, but the fear of giving other people lung cancer is not one of them.

## Lung cancer in pets

From Mr Robert Taylor

Sir, On the subject of passive smoking and lung cancer in pets (report, January 27; letter, February 4) a search of the literature revealed one study which concluded that pet dogs were more likely to develop lung cancer if they shared their home with a smoker although the link was weak (Reif, J. S. et al., *Am. J. Epidemiol.*, 1992 (135) 234-239). The increased risk was found to be related to the shape of the dog's skull, the risk being greater in breeds with short noses than in those with long noses. This is probably because of efficient air filtering in the long-nosed breeds.

There appears to be no published evidence of ill effects of passive smoking on pet birds, although a study by Kohlmeier, L. et al. (*British Med. J. Clin. Res. Edition*, 1992, 305 (6860), 986-989) indicated that pet birds increased risk of lung cancer in their owners.

Yours faithfully,  
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Box 1

ON PASSIVE SMOKING

Source: *The Times* London  
Feb 3rd 1994, p15  
and *The Times*, London  
Feb 15, 1994.



et. al., and Box 1). Finally, the effects of tobacco and alcohol on health are constantly being reappraised. There are recent studies which find that nicotine protects against Alzheimer's disease, and alcohol against heart disease. This illustrates the dubiousness of the purported certainty of medical relationships (effects and cures), which are much hazier and more uncertain than is implied by current technocracy.

### III. DALYS and QALYS

In discussing the role of private and public financing of the clinical services component of health care, it must be noted that, "there is no absolute medical "need" and no obviously correct treatment which matches every condition. There are often several alternative ways of treating a particular patient, each with its own advantages and disadvantages. Every such decision includes non-medical elements, such as cost (in terms of time and money), the patients preference for this or that degree or type of risk, and the patient's willingness to cope with more or less pain or inconvenience ...Thus health care is partly (though not exclusively) like other consumer goods. To the extent that it is like other goods, funding from taxation is inappropriate" (Green, 1988, p. 9). Lacking any objective standard for judging how much care is required in a particular case: *"The real issue is whether the individual concerned is to have a say and be able, by an additional sacrifice, to get more attention or whether this decision is to be made for him by somebody else."* (Hayek, p. 299, emphasis added). Public provision of the "essential" package recommended by the WDR would require the substitution of consumer preferences by the expert's norms. But can any such norms for rationing the necessarily scarce 'commodity' -- health care -- by mandarins rather than by the purse be laid down?

The DALYS indices recommended and used by the WDR are adaptations of the quality adjusted life years (QALYS) which have become a central part of the resource allocation process for health care recommended by the health technocracy. But how valid are these indices?

It is best to concentrate on QALYS. For there has at least been some attempt to provide a theoretical justification for them, by linking them to consumer preferences. We need to know how individuals value variations in the length of their future life and its quality. Alternative treatments effect both the length and quality of life. They also have different costs. Given the individual's preferences among these alternative "lives" made possible by different treatments, the individual will naturally choose the one which yields him<sup>2</sup> the highest net benefit. In an undistorted market where the individual bore the costs himself, standard consumer theory tells us that his revealed preference would ensure that he was maximizing "utility", and tell us which treatment was better or worse for him. But for QALYs to be useful for planning public health provision, in addition, we need to know (a) how much better or worse each treatment is for each individual, and (b) know how to weigh the good achieved by one person against another. Problems of deriving a cardinal QALY index which is interpersonally comparable are unavoidable if QALYs are to be the basis of health planning.

Broome has recently shown how given certain assumptions a cardinal measure of a person's QALY could be derived from his preferences.<sup>3</sup> But the problems of interpersonal comparison are insuperable. If, as is commonly assumed in the health planning literature that, the value of a QALY is the same to everyone, it implies

the same distance on different people's scales of quality adjustment factors always represents the same amount of good. The

nought on each person's scale is the quality that makes life just not worth living. The one is good health. The assumption is that the distance between these two represents the same amount of good for each person. This is quite implausible. The nought represents the same level of good for everyone because it is the level that is just not good at all. But good health is plainly not equally good for everyone. Good health is only a state of good health, and nothing else in one healthy person's life maybe good, whereas everything else in another's may be. QALYS to one person will represent more good than QALYS to another. Prolonging the life of say, a happy person will do more good than prolonging the life of an unhappy one.

(Broome, p. 161)

Second basing medical decisions on QALYS is inherently unfair.

"Restoring an old person to health produces fewer QALYS than restoring a young person to health, because the old person has fewer years to live. So, in a way, QALYS count the health of old people for less than the health of young people ... [thus] valuing a year of healthy life equally for everyone, can defensibly be claimed to be unfair to the old" (Broome, op. cit.)

The third problem is related, and concerns those decisions which effect which people exist. Broome states the problem as follows:

There are two ways of bringing it about that years of good life are lived -- of producing QALYS that is. One is to prolong a person's life or make it better. The other is to bring into existence a new life. A decision made in medicine will do both. ...Traditionally, QALYS brought about by creating a new life are not counted at all ... [this] leads to an anomaly at the borderline between creating life and prolonging life. A study by Boyle et. al. attaches a high value to saving the life of a prematurely born baby, because if the baby survives she will gain a whole lifetime of QALYS. It seems odd that saving a baby should be valued so much higher than, say, saving a twenty year old. Kuhse and Singer commenting on this study point out how particularly odd it would be unless a similar high value is attached to the life of an unborn fetus. But it is not at all clear how the traditional procedure should be applied to a fetus. ...[I]t matters crucially when a person comes into existence. Once she exists, all her future QALYS will count; up till then, none of them. But the beginning of a person seems inherently vague, so it seems wrong to attach great importance to the moment when it occurs. ...If we doubt there should be a large difference between the value of saving a premature baby and the value of saving a fetus, that may make us doubt that the value of saving a baby is really all the QALYS in the rest of her life. It may cast doubt on our whole way of using QALYS.

(p. 162)

The problem of basing allocative medical decisions on QALYS appears to be similar to that facing centralized production planning based on fixed input- output coefficients. In both cases the basic problem, as Hayek emphasized vis a vis production planning is that, the relevant information cannot be obtained by the center at reasonable cost, and in addition there are the well-known problems in both types of planning of aggregating individual preferences into some collective preference function. The first problem is insuperable for a planned economy because the relevant information is dispersed and held at many local levels, and the second because there is no generally acceptable non- dictatorial way of making interpersonal comparisons of "utility". The great merit of the market over the plan is that it finesses these two serious problems of any form of planning.

For our purpose this discussion highlights *the impossibility of any objective definition of an "essential" clinical package for any country*. Just as there are no easily discoverable technological coefficients to allow planners to derive an efficient production plan, there are no objective QALYS, and ipso facto QALYS, to allow them to derive an efficient health plan.<sup>4</sup>

## II. A PRIORI ARGUMENTS FOR PUBLIC INTERVENTION IN HEALTH CARE

But even if the case for planning is undercut, there may still be a case for government intervention in health markets, if "health" is a different type of commodity from other goods and services traded on markets. Health economists usually claim that "health" is different, and its special characteristics makes the market for health care intrinsically imperfect. Government intervention is therefore a sine qua non for correcting the pervasive market failure in health markets. In this section we examine these common a priori arguments for government regulation and/or public

financing of health care.

The WDR93 provides "three rationales for government intervention in the health sector -- provision of public goods, reduction of poverty and market failure" (p. 57). We have dealt with the public goods argument in the previous section and found that *in most but not all cases the public health measures commended on these grounds are sound*. It is the rationale for government intervention based on grounds of poverty redressal and market failure as related to the market for clinical services which concerns us in this section.

(I) Market Failure: Let us begin with market failure, and the purported different characteristic of health markets. In discussing this issue two important points need to be borne in mind.

The first is a distinction which Arrow made in his classic article on health markets, namely that between the inherent characteristics of health care and those which can be observed in any particular market for health care which differentiate it from many other goods and services. The inherent differences between health care and other commodities Arrow argues are due to uncertainty about: (a) "the incidence of disease" and (b) "the efficacy of treatment". These cannot be remedied. The observed differences in the market for health care and other commodities is based on the "social adjustments to these inherent characteristics". The question then is whether the observed market "adaptations to the existence of uncertainty in the incidence of disease and the in the efficacy of treatment" (Arrow, p. 941) can be improved upon by government intervention?

This brings us to the second important point -- the definition of "market failure". This definition, in the health economics literature -- starting with Arrow's seminal paper -- is based on deviations of an actual

market economy from the norm of a perfectly competitive economy which has complete markets for all current and future commodities indexed by date, space and state of nature. As is well-known this yields the so-called fundamental theorems of welfare economics. These establish the Pareto efficiency of a competitive equilibrium. Given the multiplicity of these equilibria, distributional considerations summarized in a social welfare function are introduced to allow a unique Pareto optimum to be derived, based on ethical evaluation of the distribution of endowments or outcomes associated with each Pareto efficient equilibrium. Given the lack of any ethical consensus -- nationally or internationally -- on distributional issues, the Pareto optimum is of little practical relevance.

Moreover, to compare this notional and completely unrealistic perfectly competitive ideal with the workings of an actual market economy is -- as has been pointed out on numerous occasions -- to indulge in "nirvana" economics (Demsetz, Lal (1987), Culyer). More on this below.

But this technocratic public economics approach also obscures one of the most important features of a market, as emphasized by the neo-Austrian economists for instance and summarized in Hayek's felicitous phrase that, the "market is a discovery process". The perfectly competitive norm on this view is irrelevant because it is unattainable, if for no other reason than the pervasiveness of irreducible uncertainty and hence the absence of many markets. The only relevant question is how can the workings of an actual market be improved. As Buchanan states: "How does one improve a market? One does so by facilitating the exchange process, by reorganizing the rules of trade, contract or agreement" (p. 22).

Eschewing the "nirvana" approach towards appraising the market outcomes in health care, what are the a priori conclusions we can draw from the

purported sources of "failure" in these markets?

(A) Imperfect Information: The major source is imperfect information.

This covers: (i) the purported asymmetry of information between consumers and producers, which could allow the latter to exploit the former; (ii) the lack of perfect information about the specific risks faced by individuals which faces insurance companies with problems of adverse selection and (iii) the lack of information on the present state of nature of the insured which could provide the insured with an "incentive to change this unobservable state in response to insurance coverage" (Pauly, p. 45), that is the problem of "moral hazard". Given these departures from the perfect information assumption required for the perfectly competitive norm of nirvana economics, some (e.g., Barr) have concluded that as "the advantages of competition are contingent on perfect information", greater competition in the health market is undesirable, and hence some form of socialized medicine is required.

But this conclusion does not follow (see Culyer). For, since Stigler's pioneering work, it is well-known that information is a good like any other -- with costs and benefits. With positive costs of acquiring information, it will never be privately or socially optimal to have perfect information in any market. The optimum being given as usual by the equation of the marginal benefit with the marginal cost of its acquisition.

(i) Ignorant Consumers and Informed Producers: Hence, there is no essential difference between health care and many durable goods markets, in which the producers know more about their goods than consumers. The market response in both cases is for consumers to rely on the producers reputation, second opinions (and in durable markets: personal comparisons of different products), and third party recommendations (for instance through the

recommendations of consumer surveys). How much better the consumer wishes to be informed will depend upon his preferences and the costs of acquiring the information. But given the irreducible uncertainty inherently characteristic of the health market, he can never be perfectly informed.

In this respect the choices made in health care are closer to investment decisions about creating productive assets (e.g., factories) whose output and profitability depend upon what will happen in an irreducibly uncertain future. After the debacle of socialist economies engendered by planners hubris, it is now recognized that, irreducible uncertainty or ignorance about certain aspects of the future is unavoidable. To assume it away or reduce it to actuarial risk in some form of centrally imposed plan will lead to worse outcomes than those arising from the decentralized bets placed through a market (see Lal, 1983). Just as financial and economic health is not served by technocratic production planning in an irreducibly uncertain world, nor is physical health likely to be achieved through suppressing the market in health care.

Furthermore, societies have developed means, through internalized moral codes for doctors, to minimize the dangers of doctors exploiting less well informed patients. This is represented by the Hippocratic oath, as well as the "trust" involved in the doctor-patient relationship. In this respect the health care market is likely to be less "exploitative" than that for say used cars!

(ii) Moral Hazard and Adverse Selection: Adverse selection and moral hazard are again unavoidable features of any real world insurance market.

The WDR 93 claims:

All the limitations on moral hazard and adverse selection [in other insurance markets] are weaker in health insurance. It is harder to identify individual risks, and still harder to attribute them to behavioral choices. There is no market value for the



human body and no possibility of abandoning one that is worn out and acquiring a new one. The lack of a natural limit on costs (since the asset being insured, the body, has no price with which costs can be compared) distinguishes health from other insurable risks. (p. 56)

It would be instructive to sort out the confusions and non-sequiturs in this statement. But this would take us beyond our space limitations. But note the market value of a human body is irrelevant for health insurance -- through which consumers are merely purchasing services as with insurance policies for repairing dishwashers!

(a) Moral Hazard: The technocratic public economics school argues that, with imperfect information, the ideal insurance contracts which would exist in a "complete markets" Walrasian equilibrium cannot be offered in any real world insurance market, because of moral hazard and adverse selection. Hence in Arrow's (1965) words "clearly further innovation is desirable in the provision of health insurance, and I see no convincing argument that, in the absence of alternatives, it is undesirable or unnecessary for it to take the form of an increased role for the government" (p. 55). Whilst Barr (1992) in his recent survey of the welfare state (mainly pensions, income support and public financing or provision of medical services) states that "a central theme is the importance of the literature on imperfect information in establishing an efficiency case for various types of state intervention" (p. 742). But is this normative use of the ideal Paretian optima to judge the efficiency of how an actual market outcome copes with problems of moral hazard and adverse selection, justified?

Demsetz is devastating in his negative answer to the above question.

He writes:

Moral hazard is identified by Arrow as a unique and irremedial cause of incomplete coverage of all risky activities by insurance. But in truth there is nothing at all unique about moral hazard and economizing on moral hazard provides no special problems not

encountered elsewhere. Moral hazard is a relevant cost of providing insurance; ...A price can be and is attached to the sale of all insurance that includes the moral hazard cost imposed by the insured on the insurance companies. And this price is individualized to the extent that other costs, mainly costs of contracting, allow. The moral hazard cost is present, although in different amounts, no matter what percentage of the value of the good is insured. The moral hazard problem is no different than the problem posed by any other cost. Some iron ore is left unearthened because it is too costly to bring up to the surface. But we do not claim ore mining is inefficient merely because mining is not "complete". Some risks are left uninsured because the cost of moral hazard is too great and this may mean that self-insurance is economic. There is no special dilemma associated with moral hazard, but Arrow's concentration on the divergence between risk shifting through insurance and risk shifting in the ideal norm, in which moral hazard is presumably absent, makes it appear as a special dilemma. (p. 8)

In other words, much of this technocratic analysis smacks of nirvana economics. The important question as Demsetz notes is "Do we shift risk or reduce moral hazard efficiently through the market place? This question cannot be answered solely by observing that insurance is incomplete in coverage. Is there an alternative institutional arrangement that seems to offer superior economizing?" (p. 9). This question is now being asked by theorists concerned with the positive economics of insurance. The answers they have come up with in designing their so-called "incentive compatible" contracts in the presence of moral hazard, seem to mimic the market. Thus Laffont (p. 186) finds that such a contract will have both co-insurance and deductibles as essential features!

(b) Adverse Selection: What of adverse selection? As this is the case which Barr (1992) uses explicitly to derive his dirigiste conclusions, it may be worth spelling out the arguments within the technocratic framework more fully. This brings out both why they do not work, and also why as in the moral hazard case there is no a priori case that can be made for any necessary inefficiency of the market solution when adverse selection is an essential feature of health or any other insurance market. As the general

reader may find this tedious, this discussion is banished to an Appendix. Here we can summarize the conclusions.

Even in perfectly competitive "full information" markets, efficient insurance contracts will differentiate between different types of risks. Differential contracts with actuarially fair premia based on each individual's "riskiness", and which fully insure the risks, would be offered. This separation of risks, pejoratively labelled "cherry picking", would thus be an essential feature of these perfectly efficient contracts. No contract which pools the risks by charging a common premium for different risks would be Pareto superior (that is could make some one better off without making someone else worse off) to these differential contracts. A pooling contract would thus have to be enforced by legislation and would imply that low risk individual's subsidize the high risk ones. Eschewing distributional considerations, there can be no "efficiency" justification for these enforced transfers.

Second, with imperfect information, under competitive insurance there would again be a separation of contracts, with full insurance contracts to attract the high risks, and partial insurance contracts (with deductibles say) to attract the low risk individuals. The high risk individuals would even under these contracts -- devised to overcome adverse selection -- be as well off as in the case of perfect information. But the low risk individuals would be worse off. This does not however imply that a politically enforced pooling contract would be Pareto superior. In many cases it will not be, and in those cases where some pooling is Pareto superior, it is likely that, competitive insurance companies will offer a mix of contracts, some of which could -- as they do in the real world -- involve pooling. *There is no a priori reason therefore to believe that with adverse selection, and/or moral*

*hazard, there is any political solution which is Pareto superior to that provided by a competitive market.*

For, as Hayek has emphasized, the market is above all a discovery process. Enforced pooling of all medical risks (as the Appendix shows) could be Pareto inferior. Given uncertainty, it is unlikely that, the search for more Pareto efficient contracts through the market (including pooling), can be replaced by the technocratic design of an ideal system based on Walrasian general equilibrium theory.

(B) Administrative costs and Increasing returns: It is also argued (e.g., by Arrow) that, because of administrative costs, insurance premiums will be loaded in the private health market, so that they will not correspond to the actuarially fair contracts in the ideal perfectly competitive market. But as Culyer notes:

clearly, if marginal social costs are incurred in administering insurance, a price for insurance which ignored them would imply a state in which social welfare could be increased: assuming a negatively sloped demand curve for risk avoidance, too many people would be insured. The absence of an actuarially "fair" price cannot therefore be held to be an inefficiency of the market save in comparison with the hypothetical ideal world where administrative costs are absent. (pp. 197-8)

Nor do the presence of increasing returns in health markets invalidate the market solution, except in comparison with the unrealistic norm of perfect competition -- which cannot exist with increasing returns to scale. A similar argument was used in the 1950s and 1960s to justify nationalization and public production of various goods such as steel. The unavoidable government failure which made this solution even worse than the operation of the imperfect market is well-known, and hopefully accepted for most commodity markets. There is no reason why government failure in health markets will not also lead to worse outcomes than those arising from the

workings of a necessarily imperfect market.

Hence our conclusion: *None of the purported "market failures" is unique to health markets. Just as we do not now consider such arguments based on comparisons with an unattainable ideal to be relevant in suppressing private markets for other goods by political solutions, there is nothing special about health care which would upset this practical presumption in favor of the market over mandarins.*

(II) Poverty Alleviation: Poverty alleviation is the second major a priori argument used to justify public rather than private financing of health care. In assessing this argument a useful distinction between different types of poverty, based on differing causes, is worth noting.<sup>5</sup> Following Illife, we can distinguish between: (a) mass or structural poverty, (b) the poverty due to destitution (that is lacking resources for necessities), and what can be termed (c) "conjunctural" poverty.

Mass structural poverty has been the fate of much of mankind, until the Industrial Revolution launched the era of modern economic growth. Till then, (see Wrigley) output growth was bounded by the productivity of land -- a resource whose supply was necessarily fixed. Because land is subject to the law of diminishing returns, there was a natural limit to the growth of output. The system of capitalism and free trade outlined and defended by Adam Smith could provide a once for all boost to the productivity of these organic agrarian economies -- all of whose raw material inputs for food, clothing, housing, fuel and mechanical energy were dependent upon and constrained by land. It would also help the poor by lowering the cost of their consumption bundle, whilst boosting their wages as producers. But if this increase in popular opulence led to excessive breeding, the land constraint would inexorably lead back to subsistence wages. Technical

progress could hold the stationary state at bay but the land constraint would ultimately prove binding.

The Industrial Revolution allowed the development of a mineral based energy economy, in which given the vast capital stock of stored energy represented by fossil fuels (which the steam engine allowed to be converted into mechanical energy), "the prospects for growth both in aggregate output and output per head were entirely transformed from those which had previously obtained". It allowed mankind to create "a world in which poverty has become an optional state rather than a reflection of the necessary limitations of human productive power" (Wrigley, pp. 5-6).

As the historical experience of the First, and that of many countries in the Third World has shown, it is possible to eradicate mass poverty by adopting a liberal economic order which promotes efficient and labor intensive growth. There is no other "non-market" substitute for eradicating mass poverty. Substituting public for private financing of health care is irrelevant to the question of dealing with the eradication of mass structural poverty.

This leaves the other two types of poverty which have historically been of importance.

Destitution, was the problem of poverty when for millennia mass structural poverty was the norm (see Himmelfarb, Iliffe). Till recently most agrarian organic economies were also land abundant, labor scarce economies. The primary cause of destitution was a lack of labor power (either own labor- because for instance of physical disabilities -- or from family members -- because of a lack of a family). This remains a major source of destitution in land- abundant parts of Africa (see Iliffe). With population expansion and the emergence of land scarce economies in Europe

and in many parts of Asia, there arose "the poverty of the able bodied who lacked land, work, or wages adequate to support the dependents who were partly responsible for their poverty" (Iliffe p. 5). Their poverty merges with the mass structural poverty distinguished above, and growth will, as it has, lead to its amelioration. But to the extent that the maintenance of a person's labor power is necessary to prevent destitution, health measures which facilitate such maintenance would clearly mitigate the perils of destitution,

Finally there is conjunctural poverty. Historically, in organic agrarian economies this form of cyclical and hence temporary poverty was linked to climatic crises or political turmoil. Famines are a dramatic manifestation of this type of poverty. To deal with it, political stability and some means to provide income directly (through public works or food for work schemes as in the Indian Famine Code) to those who have suffered a temporary loss of income generating employment, are required. Special health measures which substitute public for private financing are again irrelevant to this form of poverty. *Thus the "poverty alleviation" argument in favor of public financing of health care is only of relevance for destitutes.*

But though destitutes have to rely on others for meeting their health and other wants, it does not follow that this "charity" must necessarily be provided by the State. Family transfers and private charitable activity -- not least through the operations of national and international NGO's -- is ubiquitous throughout the world. It reflects the altruistic virtue which the classical writers considered to be the supreme moral virtue, even though it was scarce. Given the existing level of altruism, and hence the level of private charity, is there an argument for enforcing a higher level through

coercive tax subsidies? For that is what public financing of health care of destitutes entails.

It has been argued, not least by liberals (see Friedman) that the alleviation of destitution can be looked upon as a form of public good, in which in Friedman's words:

It can be argued that private charity is insufficient because the benefits from it accrue to people other than those who make the gifts. ...I am distressed by the sight of poverty; I am benefitted by its alleviation; but I am benefitted equally whether I or some one else pays for its alleviation; the benefits of other people's charity therefore partly accrue to me. To put it differently, we might all of us be willing to contribute to the relief of poverty, provided everyone else did. We might not be willing to contribute the same amount without such assurance. (pp. 190-91)

Thus Friedman is arguing that people are distressed by poverty for altruistic reasons. Private charities have emerged to satisfy this preference, but because of the free rider problem associated with any public good they cannot provide the optimum satisfaction. Government action to alleviate poverty is required. However, as Sugden (1982, 1983) has shown, this theoretical argument, which predicts an insufficient supply of private charity, leads to absurd conclusions. From models incorporating this argument (Schwartz, Becker) it appears that,

only two things matter to each philanthropist: his own consumption, and the total income of the charity. He is not directly concerned about the size of his own contributions; he is concerned about it only indirectly, to the extent it affects his private consumption and the charity's total income. ...This assumption is crucial because, without it, the charitable activity would not be a public good and the free rider problem could not arise. The theory further assumes that each philanthropist takes everyone else's contribution as given..and chooses his own contribution so as to bring about the outcome he most prefers. (Sugden, 1983 p. 23)

The theory leads to three predictions. Each of which are plausible in themselves. First that a rise in a persons income will lead to more charity. Second that if charitable contributions can be set off against



tax, people with higher marginal tax rates will give more to charity. Third "that each philanthropist gives more the less income the charity receives from other people" (ibid, p. 25). But these three predictions taken together imply for instance that, the combined effect of a \$1 increase in a philanthropist's income and a \$1 decrease in the income of the charity from other people will (if we assume away differential tax deductibility by assuming gifts are not tax deductible) lead to a \$1 increase in the philanthropist's gift!

The theory is erroneous in assuming that

the philanthropist is not directly concerned about his own contribution to a charity but only about his private consumption and the charity's total income. As far as he is concerned, his gift is no more significant, pound for pound, than any one else. ...An increase in his own income is no more significant to him than the same increase in the charity's income. This implausible hypothesis produces the theory's strange predictions. But it is also the hypothesis which provides the starting point for the "caring economy" explanation of the welfare state. If we reject that hypothesis we must reject the "caring economy" model too.

(Sugden, 1983, p. 28)

Moreover, as Collard has noted, one aspect of internalized moral codes is to teach the immorality of free riding. This has the implication that "we should be suspicious of any claim that the free-rider problem is never overcome by voluntary action. If private philanthropy succeeds in supplying significant amounts of a public good, we should not automatically assume that the amounts are insufficient and that everyone would benefit from the replacement of private charity by public compulsion" (Sugden, 1983, p. 30).

Thus, it is not obvious that the health needs of destitutes, which have historically depended on private charity, would be better met by substituting public for private transfers. Whether it is possible to supplement private charity with compulsory public provision, without crowding out the private supply is an empirical question (see Cox and Jimenez).

If, however, there are funds for international aid channeled through national or international agencies to alleviate destitution, then *it might be useful to provide them on some matching basis to local charities involved in alleviating destitution*. Such matching would promote rather than dull any local philanthropic instincts; and because the funds were coming from abroad would not entail any coercive local public provision of charity. They would have the same effect in promoting local (and possibly international) philanthropy as do tax deductions of local contributions to charities.

It should, moreover, be noted that, various other criteria such as "fairness" (see Dworkin) or "access" (see Diamond) to judge the issue of health financing for the destitute cannot be derived from classical liberal principles. They are based on an egalitarian ethic -- the hallmark of differing socialist sects. To reiterate, as there is no national or international acceptance of the egalitarian ethic, one cannot use it to justify the compulsory "taking" to provide public "giving", which the nationalizing of charity on grounds of "fairness" or "access" entails.

Finally, (as noted in WDR93), public financing based on either the market failure or poverty alleviation justifications has to face well-known problems of government failure. Particularly for public action to alleviate poverty, the empirical evidence from developed countries (see Goodin and Le Grand) and from developing countries (see Mesa-Lago) shows that the benefits of these programs tend to be captured by the "non-poor". The destitute poor might be worse off than with a purely market system, if the public programs also blunt the incentives for private charitable giving. *Hence our conclusion that the WDR's justification for the public rather than private financing of health care on grounds of poverty alleviation is less than*

*secure. The destitutes for whom alone this argument has any validity may not be able to do any better than with private charity. But such charity maybe further induced if foreign aid funds earmarked for poverty alleviation are offered to charities dealing with destitution on a matching basis.*

### III. PRIVATE FINANCING AND THE RELEVANCE OF U.S. AND U.K. EXPERIENCE

The discussion in the last section raises an obvious question: why are arguments for dirigisme, planning and even public production -- which have been discredited in so many other aspects of the economy -- found persuasive in discussions of health care? A partial answer is provided by an earlier observation in Lal (1976) concerning the shift in emphasis in debates on development in the early 1970s, towards distributional concerns. Then as now, current domestic American debates seem to exert a disproportionate influence on the international development agenda. Health care is not surprisingly, therefore, part of both. Nor are the terms in which they are discussed. These are based on the assumption that the American health care market, which is taken to be the paradigm of private financing, has failed. This is the empirical evidence usually cited (not least by WDR93) in support of the a priori arguments against the private financing of health care. By comparison, various aspects of the polar opposite- represented for instance by the publicly financed national health service (NHS) in the U.K. -- are lauded. As there are few pure cases of health systems financed by these different means, in developing countries, and even fewer historical and analytical accounts of their existing health systems, the purported evidence on the efficiency of different types of health financing is greatly colored by the experience of these two (and other) developed countries. Hence it maybe useful to briefly appraise this experience.

(I) The U.S. Experience: The U.S. experience is used to argue against the possibility of a truly competitive market in medical care: because professional monopoly is unavoidable; patients are too ignorant to exercise consumer sovereignty; and health insurance is flawed because of moral hazard and adverse selection. The empirical counterpart of these features (whose relevance to the financing debate was examined in theoretical terms in the last section) are the common perceptions that, in the U.S., doctors can charge what they please; unnecessary surgery is common; medical bills can bankrupt the middle classes; and the uninsured poor are denied treatment if they do not provide evidence of ability to pay. But the relevant question is: are these endemic features of health or of a private health care market, or due in part to policy-induced distortions? For if they are policy induced, then changes in policy could improve the market outcome. If they are endemic to health no public intervention is likely to make matters better.

It is therefore instructive to find a historical discussion of the U.S. experience which controverts the common impression of it, particularly as it is written by some one familiar with the polar opposite -- the NHS. David Green in a series of studies has argued that, whilst these popular impressions of the U.S. health system were to some extent justified in the mid 1960s, "the historical evidence suggests that the reasons had more to do with inept interventions than inherent defects in the market." It would take us too far afield to outline this history in any detail. But Green's summary might be helpful. *There have been two major policy induced distortions in U.S. health care; (a) politically protected producer monopolies and (b) tax-subsidy distortions in the insurance market.*

On the first, argues Green,

doctors were able to gain control of supply by capturing the power of government [to regulate health care] in each U.S. state, and promptly used this monopoly power to keep consumers in ignorance by restricting advertising, [and through the concealment of information in malpractice cases]. ...The early history of medical insurance shows that, contrary to the claims of some health economists, health insurers were capable of controlling costs, and only abandoned cost- containment measures under pressure from organized medicine. In 1982 the U.S. Supreme Court outlawed the American Medical Association's (AMA) ban on advertising. Combined with other pro-competition measures enforced by the Federal Trade Commission and a substantial increase in the number of active doctors [as the AMA lost its control on the supply of doctors which was boosted by federal subsidies to medical schools from the late 1960s], this has led to a great extension of the market. In America today the producers are on the defensive as competition cuts costs and promotes high quality.

One sign of this is that between 1975 and 1985 the median real net income of physicians fell by 5% (Clare et al, pp. 101-2). The increase in the CPI for medical services also slowed from over 10% per annum between 1979 and 1982 to 6.2% in 1984-85. "Hospital in-patient care is facing competition from one-day surgery centers, and out-patient departments are under challenge from walk-in clinics and no-wait diagnostic centers." In keeping with Hayek's notion of the market as a discovery process, new organizational forms of providing private care like the health maintenance organizations (HMO) and preferred provider organizations (PPO) -- a compromise between HMO's and traditional fee-for-service which offer the choice of doctor of the latter and the cost savings of the former -- were invented and have expanded phenomenally. It is therefore particularly ironical that these U.S. market initiated organizational forms are being imitated by the planners in the U.K. For without the experimentation of the market these forms would not even have existed to be imitated!

Secondly, a major cause of the cost escalation in U.S. medical costs and under-inclusiveness has been the tax subsidy to employer's health plans, and the third party status of the insurer. This second policy induced

distortion arose as the unintended consequence of Second world war wage and price controls. "Businesses tried to get around wage freezes by offering health insurance benefits to their employees. The Internal Revenue Service went along, granting them a tax deduction and excluding the fringe benefits from employees income" (Cato Institute, p. 8; Goodman and Musgrave). A further expansion of third party insurance occurred with Medicare and Medicaid. So that now "95% of the money Americans ... spend on hospitals is someone else's at the time it is spent. Some 81% of all physicians' payments are now made with other peoples money, as are 76% of all medical payments for all purposes. ... Because of third party payment health care has become nearly free at the point of sale, triggering an explosion in spending" (Cato, pp. 2-3).

The integration of insurance and provision through HMOs and PPOs is a way of overcoming "the divided responsibility which was created [and which] provided an especially strong incentive for individual employees to consume health care services with total disregard for the cost" (Green, 1988, p. 47). Another market based innovation to control costs is self-insurance: "This means that companies hold their own premiums and pay their own claims, often through a third-party administrator whose raison d'être is the avoidance of waste. In 1977, 16% of insurance premiums were paid by companies wholly or partly self-insured. By 1986 the figure had increased to 36%" (ibid). But the proper remedy is to remove this policy induced tax-subsidy distortion or to at least alleviate it, as the Cato plan for replacing the subsidy to employers by one to employees Medical Savings Accounts (like IRAs) is designed to do (see Goodman and Musgrave for details).

What of the uninsured? "About one third of the uninsured are poor or near-poor; but half the total are not, and have incomes at least double the

poverty line (Wilensky, p. 54)" (Green, p. 79). Nor are the uninsured without all health care. "'Uncompensated care', which includes charity care and unpaid hospital bills is provided on a large scale by the vast majority of hospitals. [Whilst] county hospitals, which are funded from local taxes ... function under an obligation to treat all patients" (ibid). But clearly, *it is regressive to give health subsidies to the employed. It would make more sense to divert them to subsidize the poor.*

And what of the alternative system of tax financed socialized medicine under the NHS? Green's conclusion is devastating:

[T]he NHS presents a very sorry picture compared with American health services. Under-funding will remain an endemic feature of the NHS so long as it is financed from taxes. No collectivist arrangement can accurately reflect the wishes of consumers. Without competition, consumers will continue to be poorly served and second class treatment will remain the NHS norm. ...To give consumers, rich and poor alike, real power of choice it is vital to learn the lessons of recent U.S. experience. Private funding, with government subsidies to protect the poor, is preferable to taxation; competition is better than a doctors' monopoly; and the trial-and-error of the free market is superior to the bureaucracy of the NHS.

It is ironic that just as the U.S. health care market was being freed from policy induced distortions in the 1980s, and being looked upon as a model for the U.K., the U.S. should be moving towards a NHS!

(II) Pre-NHS Experience in the U.K.: This misinterpretation of the U.S. experience has been compounded by the amnesia surrounding the forms of health care financing that had developed in the U.K. before the NHS was set up. These are of particular relevance. For, in the 19th century, when these market-based innovations arose, the U.K. was similar in many ways to many developing countries. Its past experience may then be of relevance for market based health care systems in developing countries.

Before the NHS "consumers in Britain joined mutual aid associations which negotiated a price/service package with individual doctors and framed rules governing the conduct of doctor and patient. Standards were upheld by competition and by an internal complaints machinery with the minimum of government involvement. The development of these organizations was stifled by the monopolists of the NHS" (Green, 1988, p. 87).

The trend towards public financing of health care had begun with the substitution of public for private social welfare services in Lloyd George's National Insurance Act of 1911. In the century before, friendly societies were the most important providers of social welfare. They were

self-governing mutual benefit associations founded by manual workers to provide against hard times. They strongly distinguished their guiding philosophy from the philanthropy which lay at the heart of charitable work. ...Any assistance was not a matter of largesse but of entitlement. ...They began as local clubs ..but the 19th century saw the gradual evolution of national federations with hundreds of thousands of members and carefully managed investments. (Green, 1993, p. 30)

By 1911, when compulsory national insurance was introduced to cover 12 million people , "at least 9 million were already covered by ... voluntary insurance associations, chiefly the friendly societies" (ibid, p. 32). The main risks insured against were illness and death. It also appears that membership of friendly societies was higher in poorer areas, "but there were many who ranked among the low paid, and particularly those in irregular or seasonal work, who found it difficult to keep up the contributions" (ibid, p. 69).

For their medical needs, the destitutes relied on the Poor Law, others relied on fee for service with the "fees charged [varying] according to income, with rent taken as the chief test of ability to pay"; another "large section of the population obtained care free of charge through charities" such as hospitals, and another large segment was made up of "prepayment



schemes, commonly called contract practice, based on the payment of a fixed annual capitation fee" (ibid, p. 70). These latter clubs "were based at factories, others were organized by charities; some were run on commercial lines, some by individual doctors, some by local associations of doctors and some by the friendly societies. By far the most important numerically were the friendly society schemes" (ibid, p. 72). But the latter were in constant conflict with the organized medical profession. The doctors particularly resented "the supervision ... and impertinence of the committee of the Friendly Society ... and [being] treated as a servant" (Green, 1993, p. 74). Matters were not helped by the differing class composition of the doctors and the friendly societies!

"The friendly societies represented the consumer and sought through competition to improve the quality of medical care and to contain pressure for fee increases. As the 19th century progressed the medical profession organized itself with ever-growing determination to eliminate competition by whatever means were available" (p. 76). Advertising, and "canvassing" by doctors were sought to be controlled as was the attempt to regulate fees. "The 1911 Act led to the dismantling of these arrangements by the state at the behest of the doctors" (ibid, p. 87). With the 1948 nationalization of medicine "all alternatives to the NHS monolith were excluded. Due partly to government efforts to satiate professional demands, but also to a misguided faith in the omniscience and organizational capacity of government, the final vestiges of competition in the supply of health care were driven out of existence" (ibid, p. 120).

This is a cautionary tale. It has a number of morals. *The first is that, we can expect- even in poor and underdeveloped societies -- mutual aid associations will evolve to meet the medical needs of all but the destitute.*

*The second is that government efforts to supplant these are usually an attempt by producer interests to stifle competition. The technocratic attitude necessarily supported by socialized medicine this capture by the experts. But, third, as the subsequent history of the NHS has shown, as with any nationalized monopoly, the result is inferior to the workings of the previous market order.*

As most developing countries are still closer to the conditions of 19th century Britain, these lessons maybe of particular relevance for them, as providing alternatives to the panaceas of technocratic health planners.

#### IV. CONCLUSIONS

To set the conclusions we have arrived at it in perspective it is useful to note one implicit theme running through the health economics literature (and in WDR93), and which was noted in passing in Section I. It is based on the assumption that the State has an inherent interest in the health of its citizens as it effects the overall productivity of the economy. Hence the promotion of "health" should be an objective of public policy. But this view is based on looking at the state as an enterprise association seeking to maximize the productivity of its enterprise. For a classical liberal who views the State as a civil association this view is unacceptable. For it implies that individuals are to be viewed rather like animals on a farm -- clearly an enterprise whose profitability is tied to the health of the animals, which could involve optimal culling!

But if the State is not such an enterprise, but a civil association which facilitates the fulfillment of individual's wants, then the health outcomes of its constituent citizens will be the result of a myriad of individual choices based on a heterogeneity of preferences, subject to individual budget constraints. There is no independent, technocratically

determined, "socially optimal" health outcome. Nor can the choices be effected by redistributing the individual budget constraints, as there is unlikely to be any ethical consensus amongst its citizens about such redistributions, and ex hypothesi, the State as a civil association cannot have -- let alone legislate -- its own ethical preferences.

One set of individual health choices may lead to a lower level of aggregate productivity than another, just as the aggregate individual choices regarding consumption and savings effect the overall rate of investment and thence growth rate of the economy. Just as we no longer accept the case for socializing investment to "optimize" its rate (based for instance in the 1960s on arguments about an externality due to the "assurance paradox" (see Sen, Marglin, Lal (1987))<sup>6</sup> and respect individual preferences in investment decisions, there is no case for not doing the same as regards health decisions. In both cases, however, it is accepted that, by contrast, physical externalities (which are Pareto relevant) require public action. This led to our first conclusion that in most, but not all cases, the public health measures commended by the WDR on these grounds are sound. And as the treatment for tuberculosis and STDs also involves diseases with physical (technological) externalities, some public subsidization of these elements of the "essential" clinical package (see Table 1) would also be valid.

The public financing of the remaining elements of the "essential" clinical package is less justifiable. As we showed in Section I, the use of DALYs to identify the elements of such a package is seriously flawed. Hence our second conclusion that it is impossible to provide any objective definition of an "essential" clinical package for any country.

Nor, third, are the a priori arguments advanced in favor of government intervention in health care markets persuasive. Those based on market failure were shown to be based on the "nirvana" approach of public economics. Nor were the purported market failures -- due to imperfect information: consumer ignorance, adverse selection and moral hazard; and/or increasing returns -- unique to health markets. Just as we do not consider such arguments based on comparisons with an unattainable ideal to be relevant in suppressing private markets by political action for other goods and services, there is nothing special about health care which would upset this practical presumption in favor of the market over mandarins. It is a misreading of the U.S. experience and amnesia about the pre NHS experience in the U.K. which is responsible for the illegitimate inference that the purported ills of the private U.S. health care system is due to unique and endemic failures of these markets rather than to policy induced distortions in their working. The market has provided the discovery process for new organizational forms to deal with the problems of imperfect information inherent in health care (and in other markets). Most of the regulations and other public interventions commended in the past have benefitted producer interests instead of the consumers, and have lowered efficiency.

Fourth, the poverty alleviation argument in favor of public financing of health care was shown to be only of relevance for destitutes. Even here it was argued that, given past experience with the political economy of transfers, the "poor" may not be able to do any better than with private charity. It maybe best to channel public subsidies (including foreign aid) for destitutes on a matching basis to charities. Besides overcoming some of the political economy problems this could also provide a further spur for both national and international charity.

Finally, for the "working poor" the mutual aid societies of 19th century Britain were shown to have much to commend them. Their formation can again be encouraged, and their resources supplemented, through the provision of matching public funds.

## NOTES

\*This paper has greatly benefitted from the comments of members of a seminar at the World Bank on an earlier draft.

<sup>1</sup>Pareto relevant externalities (that is uncompensated side-effects of a producer's or consumer's activity on other economic agents) are said to be present when, in a competitive equilibrium, the marginal conditions for optimal resource allocation and hence for Pareto-efficiency are violated. But not all the side-effects on consumers or producers in a highly interdependent market economy will result in Pareto-relevant externalities. Thus pecuniary externalities in which one individual's activity level affects the financial circumstances of another will not be Pareto relevant, for they are synonymous with market interdependence and the price system. Thus suppose some group increases its consumption of whisky, its price rises, and this affects the welfare of other consumers of whisky. This has no significance for the efficiency of the economy. By contrast, technological externalities are interdependencies between economic agents which are not mediated through the market, and hence not reflected in relative prices. A well-known example is the smoke emitted by a factory which raises the costs of a nearby laundry. Whether public health measures based on such externalities significantly improved the health of the public before 1925 in the U.S. has been contested by Anderson.

<sup>2</sup>Whenever I write "him" I of course mean "her"!

<sup>3</sup>Broome states two assumptions which allow a cardinal measure of QALYS to be derived.

The first, [is] that the goodness of a life for a person is the total of the good it brings her at each of the times in her life. One good reason to doubt this assumption is that, because it counts the total of good only, it gives no value to the evenness in the distribution of good through life. It might reasonably be thought that a uniformly good life is better (or perhaps worse) than a life with ups and downs but the same total.

The second assumption is that

the goodness of a person's life at any particular time depends only on the quality of her life at that time. ...Granted the two assumptions ... it follows immediately that the goodness of an outcome for a person is the number of life years it brings her, adjusted for quality. The quality of a particular year of life determines how good that year is for her. Adding up these amounts gives us the total of good in her life, and I have assumed that is equivalent to how good the outcome is for her. The appropriate quality adjustment in this calculation is given by how good the quality is for the person. Future years are not discounted. (Broome, pp. 157-8).

<sup>4</sup>To the extent governments are already financing health care through taxation, it maybe less wasteful to allocate this expenditure on the basis of QALYS. This could provide a second best justification for their use.

<sup>5</sup>The following is based on Lal (1993a).

<sup>6</sup>The assurance paradox stated that as individuals were mortal but society was not, individuals would discount the future at a higher rate than society, and hence save less than was socially optimal. There could thus be a Prisoner's Dilemma. So that if each person was assured that every one else was saving at the socially optimal rate the socially optimal rate of savings and investment could result.

<sup>7</sup>This is based on Stiglitz, Kreps, and Laffont. Also see Hirshleifer and Riley.

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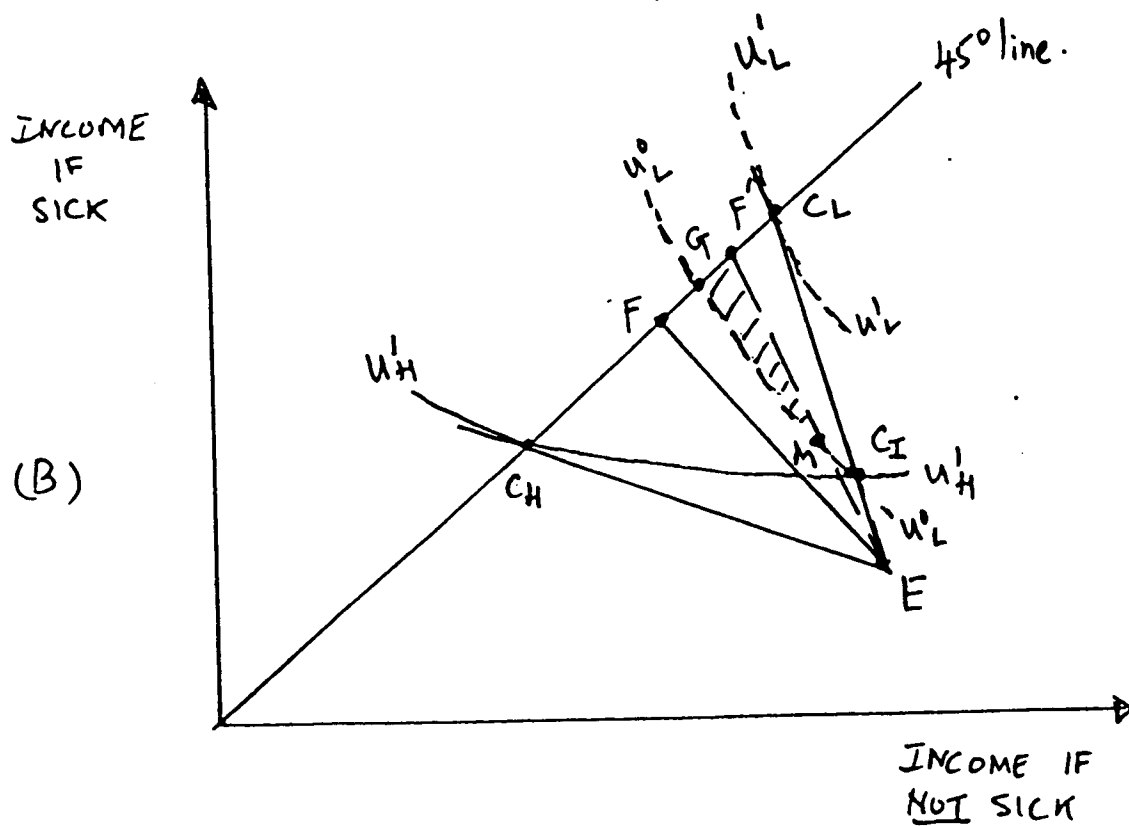
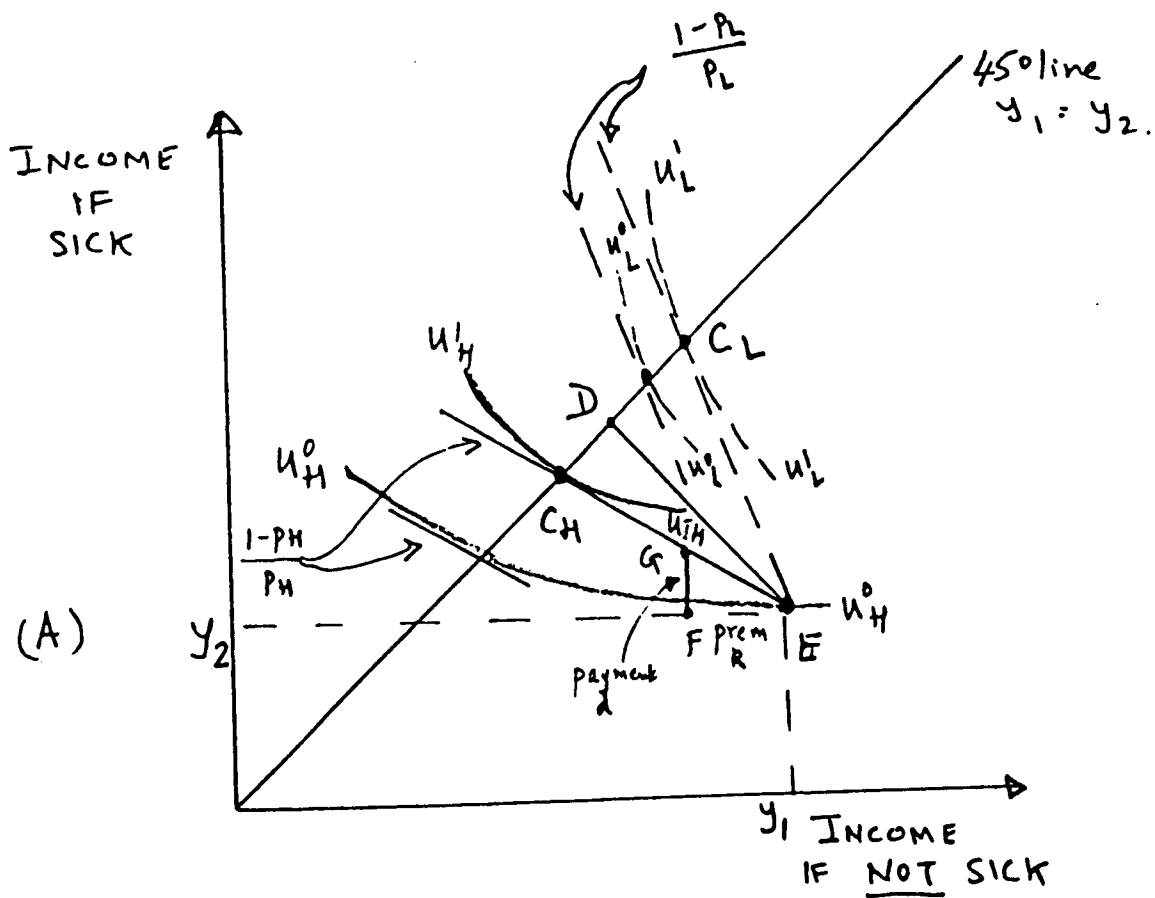
## APPENDIX

The Economics of Insurance<sup>7</sup>

The whole of the argument about insurance can be summarized in one diagram (Fig. 1). Suppose that there are only two otherwise identical individuals (thus abstracting from distributional considerations) who differ in their probabilities of falling sick ( $p$ ). The high risk individual (H)'s probability of falling sick ( $p_H$ ) is greater than that of the low risk individual (L)'s ( $p_L$ ), so that  $p_H > p_L$ .

Next suppose that, for both individuals, if they do not fall sick, their income is  $y_1$ , and at the lower level  $y_2$  if they are sick, and they have no way of insuring against their respective risks of falling ill. Their common no-insurance "endowment" in the two possible "states of nature" -- not being sick, being sick -- can then be depicted by the point E in Fig. 1(a).

Given their common degree of risk aversion, both individual's would be willing to trade off some of their income when they are well, to raise their incomes above what it otherwise would be if they were sick. These preferences for trading off income from the "well state" to the "unwell state", can be depicted by a set of indifference curves. But as the probabilities of falling ill differ for the two individuals, who in all other respects are identical, their indifference curves will differ. The higher risk individual will have flatter indifference curves than the lower risk individual (the dashed ones in the Fig.) This is because the high risk individual has a greater chance of having a low endowment state prevail. Hence, additional income for him will be worth more in that state than to a low risk person with a lower chance of suffering such an adversity. That is



if we reduce  $y_1$  a bit from  $E$ , it takes a smaller increase in  $y_2$  to compensate the high risk individual to maintain the same level of "utility" than the low risk individual. Thus the high risk individual's indifference curves will be the flatter bold ones, and the low risk's the steeper dashed ones shown in Fig. 1.

Another feature of these indifference curves is that on the  $45^\circ$  line where income in both "states" is the same (sometimes called "full insurance") they will have the same slope equal to the probability of not being sick to that of being sick  $[(1-p)/p]$ . So that the slope of the high risk individual's indifference curves along the  $45^\circ$  full insurance line will be  $(1-p_H)/p_H$ , and of the low risk one  $(1-p_L)/p_L$ . As  $p_H > p_L$  it follows that the slope of the high risk individual's indifference curves along the  $45^\circ$  line will be less than that of the low risk one.

Next, introduce a competitive insurance firm which is risk neutral, and offers to insure the two individuals for a given premium  $(k)$ , in return for a payout of  $(d)$  if the individual falls sick. With competition, the firm just breaks even. So for each individual, the firm's zero profit actuarially fair contract is simply:

$$(1-p)k - pd = 0 \quad (A)$$

Starting from  $E$  in Fig. 1(a), for the high risk individual the insurance company can for instance offer a zero profit contract given by point  $G$ . Inspection of the diagram and the zero profit condition stated above, then tell us that the slope of the zero profit line of contracts will be equal to the ratio of probabilities of not being sick to being sick  $(1-p)/p$ . [This follows directly from (A) as the slope of  $GE$  is  $d/k = (1-p)/p$ ]. But we also know that this is also the slope of the relevant set of indifference curves at the full insurance  $45^\circ$  line. Hence the zero profit contract line

from E for each risk type must be tangential to the relevant indifference curve on the  $45^\circ$  line. This yields the points CH for the high risk individual on the zero profit contract line ECH, and CL for the low risk individual on his zero profit contract line ECL. For the firm, any contracts lying above these lines will entail losses and any points below profits. Given the former, consumers cannot do better in terms of attainable utility than accepting the "full insurance" contracts given by point CH for the high risk and CL for the low risk individual.

(I) Perfect Information: If the firm could acquire full information about the probabilities  $p_H$  and  $p_L$ , that is there was perfect information, and the insurance industry was competitive then these full insurance contracts would be the only ones to be found. For if the firm tried to choose contracts below the ECH and ECL lines, it could increase its profits, whilst lowering the welfare of both risky individuals (as they would be on lower indifference curves compared to CH and CL). But given competition these profits would be competed away by rival insurers offering the contracts CH and CL. Thus it is clear that the Pareto efficient contracts, which yield the highest attainable utility to the two individuals with different risks would involve separating the two risk classes completely, and offering both full insurance contracts, with the high risk individuals paying higher premiums to offset their higher risks than the low risk individuals. Hence, *the "cherry picking" so often condemned in health insurance as being inefficient is in effect part of the most efficient contract!*

The same diagram can also be used to show that with perfect information and competition amongst insurers a so called "pooling" contract in which both risk groups are charged a common premium would not be voluntarily



chosen. Thus suppose the proportion of the low risk individuals in the population is  $(g)$  and thence that of the high risk is  $(1-g)$ . Then the zero profit condition can be defined in terms of the average risk of both groups  $[a = gpL + (1-g)pH]$ , as

$$(1-a)k - ad = 0, \quad (B)$$

From which, as before, the slope of this pooling zero contract line  $(d/k = (1-a)/a)$  will now depend upon the ratio of the average risk in the population. This in turn depends upon the proportion of low  $(g)$  to high risk  $(1-g)$  individuals in the population. The greater the former  $(>g)$  the lower the average risk  $(<a)$ , which then implies that the slope of the pooling zero profit line  $[(1-a)/a]$  will be greater. This line is given by ED and must lie between ECH and ECL, being closer to CL if the proportion  $g$  of low risks individuals is greater, and to CH if the converse is the case.

It is immediately apparent that given a choice between the pooling contracts and the separating contracts, the low risk types will always prefer the separating to the pooling contracts, because all pooling contracts lie to the left of CL, which is on the highest attainable indifference curve for the low risk types. Conversely a pooling equilibrium will always be preferred by high risk types because it lies to the right of CH, and hence must lie on a higher high risk individual's indifference curve. The reason is obvious, *a pooling contract involves subsidizing the high risk individuals at the expense of low cost individuals*. Thus it is clear that pooling cannot be Pareto superior to the separating contracts CH and CL, remembering that a Pareto improvement requires that one person is made better off without some else being made worse off. A full insurance zero profit pooled equilibrium would be represented by D (or other points

between CH and CL on the  $45^\circ$  line, for different ED lines representing different proportions of low risk individuals g). This would correspond say to a political "solution" like the U.K. National Health Service, which charges everyone the same "premium" and provides them with full insurance against illness -- at least in principle! In the perfect information case, which can be taken as the benchmark for evaluating efficiency it is clear that the political solution is Pareto dominated by the market solution. It is only if distributional considerations are smuggled in, and for some reason a greater weight is placed on the welfare of high risk rather than low risk groups that a political solution will be necessary and desirable. But apart from the reasons given for eschewing egalitarianism given in my earlier paper, in this medical context there are the further problems of making interpersonal comparisons of the "benefits" from medical treatments obtained by the different risk groups.

(II) Imperfect Information: The perfect information -- competitive insurance case immediately allows us to examine the more realistic case where information is imperfect. The individuals know their own risks (probabilities  $p_H, p_L$ ) but the insurers do not. In that case, if insurers offered the same full insurance contracts as before, but had no way of separating out the bad from good risks, all the high risk individuals would choose CL, and the insurer would make a loss.

To avoid this adverse selection, the competitive insurer will offer only two contracts. One will be the full insurance contract at CH -- with a high premium, and another partial insurance contract CI -- with a lower premium (see Fig. 1(b)). The first contract will correspond to the contract that would be offered to high risk individuals under perfect information (CH). The second will lie on the intersection of the indifference curve UH

of the high risk individual at CH, and the zero profit line ECL for the low risk individuals. As a result, no high risk individual will find it in his interest to choose the partial insurance contract CI, whilst no low risk individual will find the full insurance contract CH preferable to the only other contract now available to them -- the partial insurance contract CI. The low risk individuals will clearly be worse off than if there were perfect information about the differential risks. But given the unavoidable problems of imperfect information which cause the adverse selection faced by insurers, there will (under the above assumptions) be no Pareto-superior outcome available to the low risk individuals through the market.

Perhaps, there is then a "political" solution which can make a Pareto improvement over the market outcome? The obvious choice is a pooling equilibrium along the zero-profit line EF. As we have noted its slope depends upon the relative proportion of high and low risks. Suppose this line lies to the left of G the point on the  $45^\circ$  line where the low risk individuals indifference curve through CI intersects it. It is obvious that as before no pooling zero profit contract will be Pareto superior to the separating zero profit contracts CH and CI. There is no political solution better than the market.

If however the zero profit pooling line lies to the right of G say  $EF'$ , then there are pooling contracts between M and  $F'$  which are Pareto superior to the separating contracts CH and CI, as clearly the high risks would be on a higher indifference curve than  $U_{1H}$  and low risk types on one higher than  $U_{0L}$ . [In this case there will also be no market equilibrium. But this conclusion is highly sensitive to the game theoretic Nash behavioral assumption which underlies this type of model, and depending upon the assumptions about the transfer of information between the insuree and the insured,

various pooling and separating contracts become equilibrium contracts (see Helliweg, Laffont, Kreps). This would create an incentive for both the low risk types and insurance companies to identify the low risks and separate them from the high risks. Attempts at what it is pejoratively defined as "cherry picking" would be the market response, and the more this were successful the more the market solution would approximate the benchmark one identified under perfect information. *Even though some pooling contracts are Pareto superior to the separating contracts under imperfect information, it does not follow that a political solution to enforce pooling as in a national health service would necessarily be Pareto superior.*

This can be seen if, instead of the simple device of "being sick" and "not being sick" hitherto employed, we have different "sicknesses" with their different losses. These losses are the same, for the same sickness, for our otherwise identical individuals, as before. But, there are different probabilities of occurrence of these different "sicknesses" for different individuals. Then for some sicknesses the distribution of risks (the  $g$  proportions, which determine the average probability of that risk and hence the slope of  $EF$ ) might imply a zero profit pooling line like  $EF$  and for others  $EF'$ . Clearly enforcing pooling in both cases will mean that for the case of "sicknesses" with an average probability for which  $EF$  is applicable, the non-market solution will be Pareto inferior to the market one. It is for the "sickness" where the proportion of high risks is low in the population, and the  $EF$  line is to the right of  $G$  that, a pooling equilibria might be Pareto superior. But once we move beyond unavoidably simple theoretical models, there is no reason why insurance companies which operate with a variety of contracts would not find some form of pooling for these different types of "sickness" profitable.